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A Cereal Variety Survey of Oregon

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A Cereal Variety Survey of Oregon

By

D. D. Hill

A knowledge of the distribution of cereal varieties is of importance to those concerned with the improvement, production, and marketing of cereals. No survey to determine the various cereal varieties being grown in this state has been made in recent years. In order to obtain this information for the 1929 crop, questionnaires were sent during the winter of 1929-30 to growers in all of the important cereal-producing counties of the state. In those counties having county agricultural agents the questionnaires were sent to the growers by the agents. In other counties the questionnaires were sent directly from the Extension Service of the College. The data from these questionnaires are summarized in tables in the following pages and are discussed briefly.

METHOD OF SURVEY

Approximately 5,000 questionnaires were sent. The response to these questionnaires is indicated in Table I. This table, showing the response by counties, includes only those questionnaires which were usable. As will be indicated later, many questionnaires were returned which could not be used because the varieties had been incorrectly named, or in which part of the requested information had been omitted.

TABLE I. RESPONSE TO QUESTIONNAIRE FROM COUNTIES. NUMBER OF REPLIES, ACRES, AND BUSHELS REPORTED

County	Wheat			Oats			Barley		
	replies	*acres*	*bu.*	*replies*	*acres*	*bu.*	*replies*	*acres*	*bu.*
Benton	15	448	9,333	12	407	14,223	6	106	4,336
Clackamas	47	439	15,922	31	486	21,962	11	79	3,197
Columbia	2	90	2,802	2	76	4,202	-----	-----	-----
Douglas	31	383	10,397	22	273	9,916	8	64	2,807
Jackson	12	251	8,594	8	66	3,758	8	151	4,336
Lane	42	544	12,832	28	945	34,421	15	220	10,203
Linn	57	789	19,121	41	1,413	59,600	21	342	12,769
Marion	25	921	27,536	22	995	41,035	5	259	11,153
Polk	29	973	30,517	25	796	33,268	11	384	13,229
Washington	63	1,558	57,151	47	1,070	65,671	22	392	18,623
Yamhill	17	471	10,141	9	287	16,919	3	83	4,165
Western Oregon	340	6,867	204,346	247	6,814	301,975	110	2,080	84,818
Baker	30	812	23,978	16	254	14,430	14	265	12,020
Crook	9	3,325	37,945	-----	-----	-----	1	25	275
Gilliam	16	24,120	370,480	1	20	900	3	67	1,381
Grant	7	23	587	5	87	6,022	2	38	2,514
Jefferson	2	560	1,155	-----	-----	-----	-----	-----	-----
Klamath	17	409	12,855	7	189	10,334	8	134	8,610
Lake	5	365	5,939	2	40	468	4	42	1,174
Malheur	25	741	33,129	5	90	6,220	12	102	5,078
Morrow	58	25,194	358,019	-----	-----	-----	3	75	1,270
Sherman	87	33,512	494,613	2	45	1,165	6	515	17,075
Umatilla	94	35,849	1,090,266	2	49	3,450	8	322	12,013
Union	50	5,214	148,974	27	666	29,535	15	279	12,165
Wallowa	32	2,898	53,207	13	199	8,408	16	317	14,780
Eastern Oregon	432	133,042	2,631,147	79	1,639	60,932	92	2,181	88,355
Total replies	772			326			202		

Table I shows a total of 772 usable replies for wheat, 326 for oats, and 202 for barley. This total of 1,300 replies represents approximately 1,000 questionnaires, or one-fifth of those sent out. In the important cereal-producing counties the response generally was good. With but few exceptions, there was a sufficient number of replies to lend significance to the data.

WHEAT

In tabulating the data from these questionnaires it has been convenient to group them for Eastern and for Western Oregon. The data on wheat varieties in Western Oregon are presented in Table II. This table shows a total of 32 named varieties being grown in 11 Western Oregon counties. Douglas and Linn counties reported the greatest number of varieties with 15 each, followed by Clackamas with 12 varieties. Of the Western Oregon counties, Polk, Washington, Yamhill, and Benton have the highest percentage of standard varieties. The four leading varieties of wheat (as shown by the survey) grown in Western Oregon are Holland with 21 percent, White Winter with 18 percent, Jenkin with 14.8 percent, and Rink with 12.2 percent of the total. The four leading varieties make up 65.5 percent of the total wheat grown in this area.

Although Eastern Oregon grows much more wheat than Western Oregon, fewer varieties were reported from this area. Table III shows 25 varieties being reported from 13 Eastern Oregon counties. Wallowa county with 11 varieties and Morrow county with 9 varieties have a greater number of varieties than any of the other counties in Eastern Oregon. Umatilla county is the largest wheat-producing county in the state, but 97 percent of its wheat is produced in two varieties. Sherman county produces approximately 95 percent of its wheat in three varieties. The four leading varieties in Eastern Oregon (as shown by the survey) are Federation with 33.3 percent, Hybrid 128 with 28.4 percent, Turkey with 21.5 percent, and Fortyfold with 13.2 percent. These four varieties compose 96.4 percent of the total wheat produced in this section.

GROWERS SURVEY CHECKED BY WAREHOUSE DATA

In order to check the efficiency of this method of survey, questionnaires were also sent to the warehouses located in the Columbia Basin counties. The response to these questionnaires by the warehouses was good. The total replies represented more than 8,000,000 bushels or approximately one-half of the wheat produced in these counties, as opposed to about 2½ million bushels as obtained from the Eastern Oregon counties by the grower-survey method. The general agreement between the two methods of survey is shown in Table IV. In this table the varieties are also reported as percentages of the total for the county. The total percentages for the area of the four leading varieties, according to the warehouse survey, are: Federation 28.0 percent; Hybrid 128, 26 percent; Turkey 23.6 percent; and Fortyfold 15.7 percent. The ranking of these varieties is the

TABLE II. WHEAT VARIETY SURVEY FOR WESTERN OREGON COUNTIES

Expressed in Percentage of Total

Variety	Benton	Clackamas	Columbia	Douglas	Jackson	Lane	Linn	Marion	Polk	Washington	Yamhill	Percentage of total
	%	%	%	%	%	%	%	%	%	%	%	%
1. Baart	-----	-----	-----	1.0	-----	-----	-----	-----	-----	-----	-----	0.04
2. Bluechaff	-----	-----	-----	-----	30.8	10.3	-----	-----	-----	-----	-----	1.7
3. Bluestem	-----	-----	-----	1.6	1.4	-----	0.8	-----	-----	-----	-----	0.1
4. Burbank	-----	0.4	-----	-----	-----	-----	-----	-----	-----	-----	-----	0.02
5. Defiance	0.3	-----	-----	-----	-----	-----	6.9	-----	-----	-----	-----	0.6
6. Early Wonder	13.4	-----	-----	-----	-----	0.5	8.0	1.1	-----	-----	-----	1.4
7. Eaton	-----	-----	-----	2.6	-----	-----	-----	36.6	-----	1.0	-----	5.2
8. Federation	0.4	-----	-----	11.8	61.1	-----	-----	-----	0.9	-----	-----	3.2
9. Foisy (Gold. Chaff)	-----	-----	-----	2.2	-----	1.6	3.4	8.7	-----	-----	-----	1.7
10. Fortyfold	-----	1.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	0.07
11. Galgalos	-----	-----	-----	-----	3.2	-----	-----	-----	-----	-----	-----	0.1
12. Hybrid 128	-----	-----	-----	-----	3.4	-----	Tr.	-----	-----	-----	-----	0.1
13. Holland	36.9	2.2	-----	-----	-----	11.7	29.3	-----	52.9	9.4	61.9	21.0
14. Huston	18.3	1.1	-----	6.9	-----	35.2	4.7	-----	3.9	-----	-----	3.8
15. Hybrid 123	-----	-----	-----	2.7	-----	-----	-----	-----	-----	-----	-----	-----
16. Indian	-----	-----	-----	0.5	-----	-----	-----	-----	-----	-----	-----	0.02
17. Jenkin	2.6	57.0	-----	13.9	-----	17.3	3.8	-----	-----	30.5	-----	14.8
18. Kinney	-----	19.2	-----	2.5	-----	-----	0.6	31.4	-----	-----	-----	5.7
19. Little Club	-----	-----	-----	31.7	-----	-----	-----	-----	-----	-----	-----	1.5
20. Marquis	2.4	-----	-----	-----	-----	8.0	2.7	-----	1.2	-----	-----	0.8
21. Mayview	-----	-----	-----	10.1	-----	-----	-----	-----	-----	-----	-----	0.5
22. Odessa	-----	-----	-----	-----	-----	10.5	4.3	-----	-----	-----	-----	0.8
23. Prohibition	-----	7.2	-----	-----	-----	-----	1.2	11.6	-----	-----	-----	2.1
24. Red Chaff	-----	-----	-----	7.4	-----	-----	-----	-----	-----	-----	-----	0.4
25. Red Russian	-----	-----	-----	-----	-----	-----	-----	-----	-----	2.1	-----	0.5
26. Rink	-----	7.7	-----	-----	-----	-----	12.9	5.0	15.5	19.1	25.4	12.2
27. White Amber	-----	1.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	0.07
28. White Winter	25.3	0.8	100	-----	-----	-----	6.7	5.6	22.5	36.1	2.6	18.0
29. Winter Beardless	-----	-----	-----	2.3	-----	-----	-----	-----	-----	-----	-----	0.1
30. Zimmerman	0.4	-----	-----	2.9	-----	4.9	14.7	-----	3.1	-----	-----	2.1
31. Turkey	-----	1.2	-----	-----	-----	-----	-----	-----	-----	-----	-----	0.08
32. Others	-----	1.1	-----	-----	-----	-----	-----	-----	-----	1.7	10.1	-----

Four leading varieties 65.5%.

Percentage of total computed from 206,850 bu.

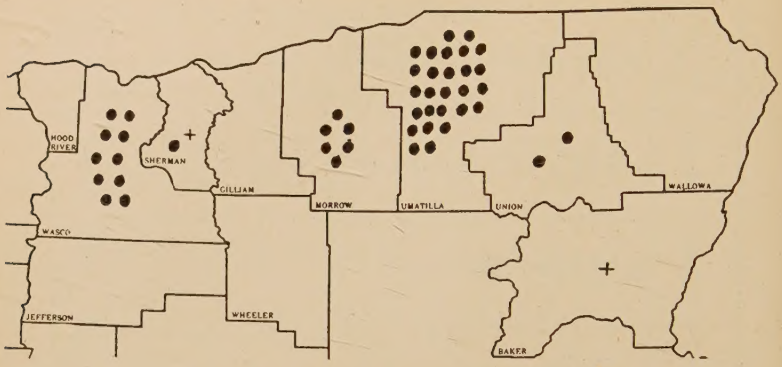
TABLE III. WHEAT VARIETY SURVEY FOR EASTERN OREGON COUNTIES
Expressed in Percentages of Total

Varieties	Baker	Crook	Gilliam	Grant	Jefferson	Klamath	Lake	Malheur	Morrow	Sherman	Umatilla	Union	Wallowa	Total
	%	%	%	%	%	%	%	%	%	%	%	%	%	%
1. Arco	.....	.....	.....	.....	.....	.....	.....	.....	.1	.....	.....	.....	.....	Tr.
2. Baart	.....	2.1	.....	.....	.....	.....	.....	2.8	.....	.....	.....	.....	.....	0.06
3. Bluestem	.....	.....	.....	.....	.....	7.4	.....	.....	1.7	.....	.....	.....	.....	0.3
4. Burbank	.....	.....	.....	.....	.....	20.8	.....	.....	.....	.....	.....	.....	.....	0.1
5. Club	.....	.....	.....	91.2	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tr.
6. Danube	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.2	.....	Tr.
7. Dicklow	.....	.....	.....	8.8	.....	.....	.....	1.3	.....	.....	.....	.....	.....	Tr.
8. Federation	60.4	.....	54.0	.....	.....	4.7	63.2	85.1	14.0	9.9	46.6	14.6	8.9	33.2
9. Fortyfold	15.1	9.2	28.2	.....	.....	.....	.....	.....	21.5	12.3	.....	38.2	65.3	13.2
10. Galgalos	.....	15.7	.....	.....	28.6	31.9	.....	.....	.....	.....	.....	.....	.....	0.4
11. Hard Federation	6.6	2.2	.....	.....	.....	0.7	.....	.....	.2	.....	.1	3.5	5.6	0.4
12. Hybrid 128	17.9	.....	.....	.....	.....	.....	.....	.....	32.6	3.3	50.5	42.7	4.9	28.4
13. Jenkin Club	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2.3	.....	.....	1.0
14. Kharkof	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2.7	0.1
15. Little Club	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.2	.....	Tr.
16. Marquis	.....	.....	.....	.....	.....	34.5	.....	3.2	.....	.1	.....	.....	4.6	0.3
17. Mosida	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.1	.....	.....	0.1
18. Onas	.....	.....	.....	.....	.....	.....	.....	7.6	.....	.....	.....	.....	.....	0.1
19. Red Hybrid 123	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.3	.....	.....	.....	0.3
20. Ridit	.....	.....	.....	.....	.....	.....	.....	.....	.....	.7	.....	.2	1.1	0.2
21. Royal	.....	.....	.....	.....	.....	.....	.....	.....	.2	.....	.....	.....	.....	0.04
22. Sonora	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.7	Tr.
23. Spring	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2.2	Tr.
24. Triplet	.....	.....	.....	.....	.....	.....	.....	.....	.8	.....	.4	.....	1.7	0 3
25. Turkey Red	.....	70.8	17.8	.....	71.4	.....	36.8	.....	28.9	72.4	.....	.4	2.3	21.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

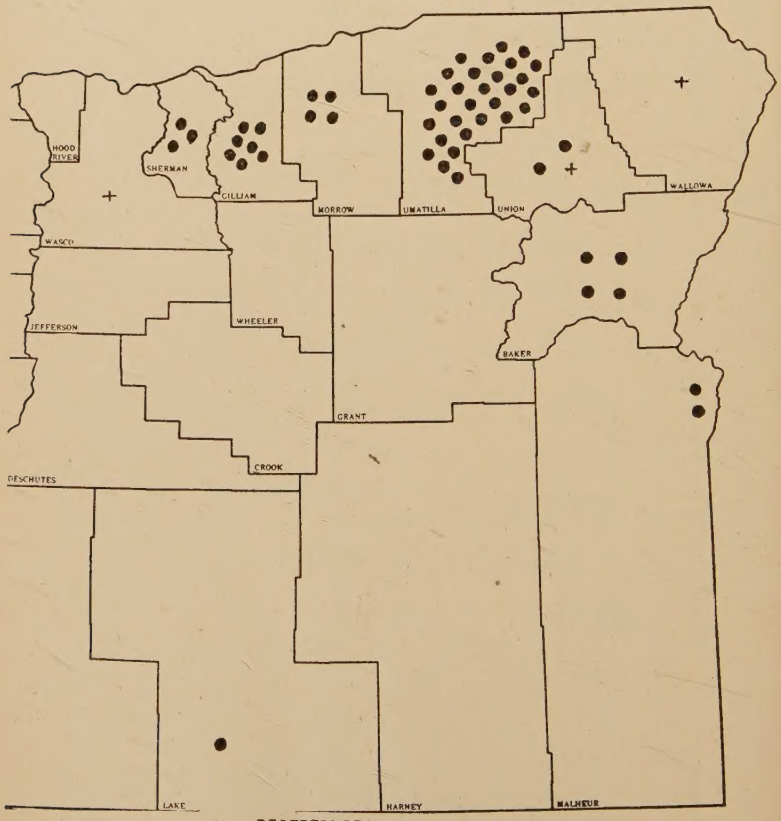
Four leading varieties 96.4%.
Percentage of total computed from 2,562,321 bu.

TABLE IV. WHEAT VARIETY SURVEY FOR 9 EASTERN OREGON COUNTIES
Expressed in Percentages of Total
Warehouse Data

Variety	Baker	Gilliam	Jefferson	Morrow	Sherman	Umatilla	Union	Wallowa	Wasco	Percentage of all wheat in area
	%	%	%	%	%	%	%	%	%	%
Turkey	0.9	17.6	62.5	28.4	74.1	0.8	0.7	2.8	25.8	23.6
Federation	88.9	29.8	0.7	20.8	9.6	49.3	30.9	11.6	4.6	28.0
Hybrid 128	-----	0.5	0.1	29.8	4.7	46.4	25.2	2.0	60.0	26.0
Fortyfold	2.3	42.3	12.2	17.4	9.4	0.7	32.9	62.7	1.0	15.7
Hard Federation	7.9	4.3	-----	1.0	0.1	Tr.	8.9	15.2	2.6	3.0
Bluestem	-----	-----	-----	0.9	-----	0.1	-----	-----	-----	0.1
Baart	-----	1.0	12.2	-----	-----	-----	0.7	-----	0.4	0.5
Triplet	-----	4.4	-----	1.2	-----	1.0	-----	4.9	-----	1.1
Ridit	-----	-----	-----	0.4	-----	0.5	0.7	0.8	-----	0.4
Galgalos	-----	-----	12.2	-----	-----	-----	-----	-----	0.3	0.3
Hybrid 123	-----	-----	-----	-----	1.8	-----	-----	-----	-----	0.4
Jenkin	-----	-----	-----	-----	-----	1.0	-----	-----	-----	0.3
Hybrid 63	-----	-----	-----	-----	-----	-----	-----	-----	5.4	0.5
Marquis	-----	-----	-----	-----	0.04	-----	-----	-----	-----	0.01
Albit	-----	-----	-----	-----	-----	0.2	-----	-----	-----	0.05
Red Russian	-----	-----	-----	-----	-----	0.04	-----	-----	-----	0.01
Mosida	-----	-----	-----	-----	-----	0.04	-----	-----	-----	0.01

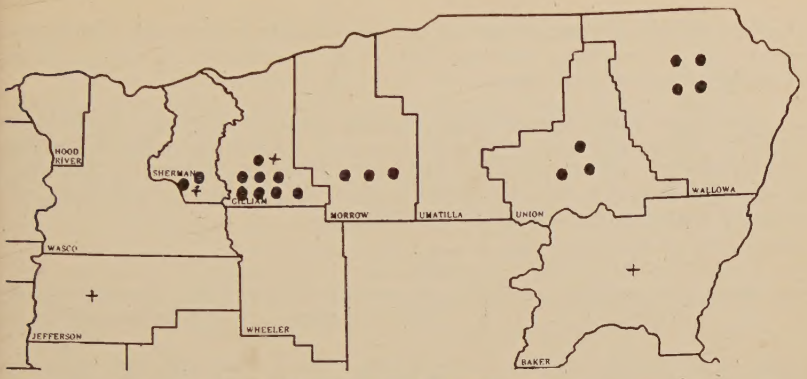


DISTRIBUTION OF HYBRID 128.



DISTRIBUTION OF FEDERATION

● = 100,000 bu.
\+ - 50,000 to. 100,000 bu.



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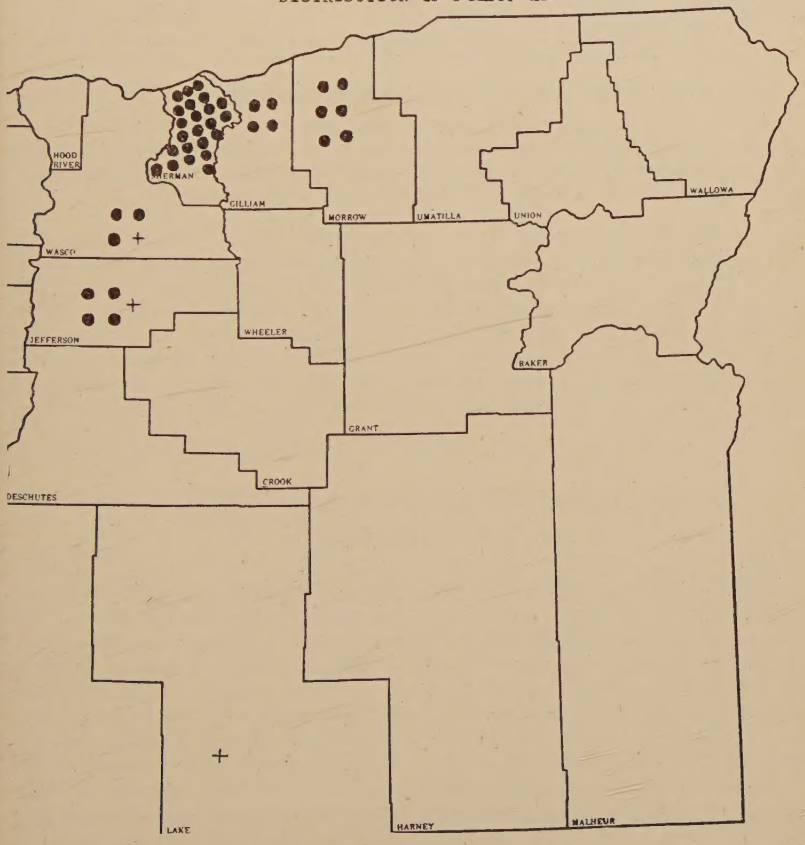

DISTRIBUTION OF TURKEY.

● = 100,000 bu.
\+ = 50,000 to 100,000 bu.

same for both methods of survey and the percentages are approximately equal. Only 17 varieties are reported by the warehouses as compared to 25 varieties reported by growers.

A further comparison between the two methods of survey is made in Table V. This table gives the data on four varieties from the following eight counties: Baker, Gilliam, Jefferson, Morrow, Sherman, Umatilla, Union, and Wallowa. Wasco county is omitted from this table because no growers' survey was made in that county.

TABLE V

Variety	Growers' survey		Warehouse survey	
	bu.	%	*bu.*	%
Turkey	516,999	20.7	1,906,436	23.5
Federation	644,611	25.8	2,480,290	30.3
Hybrid 128	730,164	29.2	1,813,034	22.3
Fortyfold	330,889	13.3	1,388,662	17.1
Total	2,222,663	89.0	7,588,422	93.2

According to the growers' survey 2,222,663 bushels were reported for the four varieties, or 89 percent of the total reported. The warehouse survey showed 7,588,422 bushels for the four varieties, or 93.2 percent of the total indicated by the survey. Both of the surveys show excellent standardization on these four varieties in the Columbia Basin counties.

The distribution of the four leading varieties is shown in Figure 1. The percentages as reported have been used to compute the total production of the variety from the total production of all wheat in a county. The Turkey wheat is largely grown in Sherman and in adjacent counties. There is a heavy production of Federation in Umatilla county. This variety is more uniformly distributed over the Columbia Basin than any other. Hybrid 128 production is confined largely to Umatilla, Wasco, Morrow, and Union counties. The largest production of Fortyfold is in Gilliam county.

HIGH DEGREE OF STANDARDIZATION IN COLUMBIA BASIN

When Eastern and Western Oregon are compared with respect to the standardization of wheat varieties, it becomes evident that a greater degree of standardization has been obtained in the Eastern section. As a crop, wheat is relatively more important here. In addition, greater emphasis has been placed on the certification of wheat, with the result that the inferior varieties have, for the most part, been replaced by standard varieties. This survey shows clearly that growers have found Turkey, Federation, Hybrid 128, and Fortyfold to be the best varieties for them to grow. It shows, too, that the range of adaptation of these four varieties is sufficient to meet most of the conditions in the wheat-growing sections better than any other variety which has been available for commercial production in Eastern Oregon.

TOO MANY VARIETIES IN WESTERN OREGON

Despite good standardization of wheat varieties in a few Western Oregon counties, far too many varieties are grown in this section. Experimental data show Jenkin, White Winter, Holland, and Rink to be the highest-yielding fall-wheat varieties. Results from the survey support this recommendation. Such varieties as Defiance, Foisy, Fortyfold, Hybrid 128, Hybrid 123, Indian, Kinney, Odessa, Red Russian, Winter Beardless, and Turkey will not compare in yield with the four standard varieties when fall planted. Federation should not be fall seeded in Western Oregon except in Douglas and Jackson counties. Bluechaff and Eaton are good varieties, but they have no advantage over the standard varieties, and they have some disadvantages.

Marquis and Huston have given better results from spring planting than have Baart, Bluestem, Burbank, Galgalos, Early Wonder, Defiance, Little Club, Mayview, or others. The replacement of this miscellaneous lot of wheat varieties by standard sorts is much to be desired.

TABLE VI. OATS VARIETY SURVEY OF WESTERN OREGON COUNTIES

Percentage of Usable Replies

County	Bushels reported	Bushels used	Percentage of total
	bu.	*bu.*	%
Benton	14,223	13,348	93.8
Clackamas	21,362	20,362	92.7
Columbia	4,202	4,202	100.0
Douglas	9,916	6,750	68.1
Jackson	3,758	3,758	100.0
Lane	34,421	27,127	78.8
Linn	59,600	53,228	89.3
Marion	41,035	33,919	82.6
Polk	33,268	26,917	80.8
Washington	65,671	55,853	85.0
Yamhill	16,919	14,877	86.4
Total	294,459	260,341	------
Average for Western Oregon			86.1

OATS VARIETY SURVEY OF EASTERN OREGON COUNTIES

Percentage of Replies

County	Bushels reported	Bushels used	Percentage of total
	bu.	*bu.*	%
Baker	14,430	4,502	31.2
Gilliam	900	900	100.0
Grant	6,022	4,523	75.1
Klamath	10,334	6,144	59.3
Lake	468	468	100.0
Malheur	6,220	5,722	91.9
Sherman	1,165	840	72.1
Umatilla	3,450	2,250	65.2
Union	29,535	23,563	79.8
Wallowa	8,408	6,198	82.2
Total	73,332	55,110	------
Average for Eastern Oregon			69.9

OATS

Analysis of the questionnaires on oats revealed that growers pay less attention to variety names in oats than they do in wheat. Many questionnaires had to be discarded from the oats survey because the variety name was not given. Table VI shows the number of bushels reported for each county, and also the number of bushels which were named and which could be used in summarizing the data. In Eastern Oregon only 69.9 percent of the replies were usable, while in Western Oregon 86.1 percent of the replies were of value. As expected, by far the largest quantity of oats was reported from Western Oregon. A total of 260,341 bushels was reported from Western Oregon, while only 55,110 bushels were reported for Eastern Oregon counties.

As indicated in Table VII, eighteen varieties were reported for Eastern Oregon. Markton was the most important variety, constituting 44.2 percent of the total. Swedish Select with 20.5 percent was the only other variety reported which represented more than 5 percent of the total production.

A much larger number of varieties was reported for Western Oregon. In Table VIII twenty-seven varieties are recorded, showing the varieties being grown in each county. Gray Winter is by far the most important variety reported. This variety constitutes approximately 56 percent of all oats grown in the Western Oregon section. Three Grain with 13.1 percent, Eclipse with 5.7 percent, and Victory with 3 percent were the leading spring oat varieties reported.

TABLE VII. OATS VARIETY SURVEY OF EASTERN OREGON COUNTIES

Expressed in Percentage of Total

Variety	Baker	Gilliam	Grant	Klamath	Lake	Malheur	Sherman	Umatilla	Union	Wallowa	Percentage of total
	%	%	%	%	%	%	%	%	%	%	%
1. Banner	.....	.....	.....	.....	.....	.....	.....	.....	7.9	.....	3.3
2. Big White	.....	.....	.....	.....	.....	.....	.....	.....	.....	47.9	5.2
3. Bonanza	.....	.....	.....	.....	.....	.....	.....	.....	1.7	.....	0.7
4. Climax	.....	.....	.....	.....	.....	.....	.....	.....	2.6	.....	1.1
5. Early 60 day	.....	.....	.....	.....	.....	.....	.....	.....	.....	3.2	0.4
6. Federal	.....	.....	.....	.....	.....	16.1	.....	.....	.....	.....	1.6
7. Gray	.....	.....	44.1	.....	.....	.....	.....	.....	.....	.....	3.5
8. Idamine	17.7	.....	.....	.....	.....	.....	.....	.....	1.2	.....	1.9
9. Iowar	.....	.....	.....	.....	27.4	.....	.....	.....	.....	.....	0.2
10. Little White	.....	.....	.....	19.5	.....	.....	.....	.....	3.8	.....	4.2
11. Markton	71.4	100.0	.....	6.5	72.6	.....	.....	100.0	66.5	34.7	44.2
12. Mortgage Lifter	.....	.....	.....	.....	.....	.....	.....	.....	6.1	.....	2.5
13. National	5.8	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.5
14. Side	5.1	.....	31.1	.....	.....	.....	100.0	.....	.....	.....	4.4
15. Silvermine	.....	.....	.....	.....	.....	.....	.....	.....	.....	3.2	0.3
16. Shadeland Wonder	.....	.....	.....	.....	.....	.....	.....	.....	1.7	.....	0.7
17. Swedish Select	.....	.....	24.8	65.5	.....	83.9	.....	.....	.....	10.9	20.5
18. Victory	.....	.....	.....	8.5	.....	.....	.....	.....	8.5	.....	4.7

TABLE VIII. OATS VARIETY SURVEY OF WESTERN OREGON COUNTIES
Expressed in Percentage of Total

Variety	Benton	Clackamas	Columbia	Douglas	Jackson	Lane	Linn	Marion	Polk	Washington	Yamhill	Percentage of total
	%	%	%	%	%	%	%	%	%	%	%	%
1. Banner	------	------	------	------	------	------	------	------	------	1.3	------	0.5
2. Black	------	1.6	------	------	9.3	------	------	------	2.1	------	------	0.2
3. Black Victor	------	------	------	------	------	------	2.6	------	------	------	------	0.5
4. Brown	------	------	------	------	------	------	2.1	------	------	------	------	0.5
5. Climax	------	------	------	11.2	12.2	2.2	2.4	------	7.5	5.5	------	3.2
6. Clydesdale	------	------	------	------	------	------	------	------	5.4	------	------	0.5
7. Eclipse	------	------	------	------	------	13.6	.9	------	------	14.4	------	5.7
8. Gray Winter	53.2	72.4	41.6	81.8	8.2	60.4	31.2	82.3	46.6	71.5	14.0	55.9
9. Kanota	------	------	------	------	38.6	------	.7	------	25.0	1.1	------	3.3
10. Laconner	------	------	------	------	------	------	------	1.8	------	------	------	0.3
11. Liberty	------	------	------	------	------	------	.2	------	------	------	------	Tr.
12. Markton	4.9	------	------	4.4	------	------	------	------	------	------	------	0.3
13. Marquein	------	------	------	------	------	------	------	------	------	------	43.5	2.5
14. Mortgage Lifter	------	------	------	------	------	------	------	------	------	------	2.8	0.6
15. Ninety Day	.3	------	------	------	------	------	------	------	------	------	------	Tr.
16. Red	9.4	------	------	2.6	31.7	.5	------	11.2	------	------	------	2.5
17. Senator	------	------	------	------	------	------	------	------	.5	------	------	0.1
18. Shadeland Wonder	------	------	------	------	------	20.8	1.2	4.7	------	------	1.9	2.3
19. Silvermine	------	1.7	------	------	------	------	------	------	------	------	30.8	1.9
20. Swedish Select	------	------	------	------	------	------	------	------	------	1.8	------	0.4
21. Three Grain	5.7	------	------	------	------	2.5	58.1	------	12.9	------	------	13.1
22. Victory	6.7	24.3	------	------	------	------	.6	------	------	2.6	------	3.0
23. Viltoe Side	------	------	10.8	------	------	------	------	------	------	------	------	0.2
24. White Russian	3.1	------	------	------	------	------	------	------	------	------	------	0.2
25. White Shadeland	14.2	------	47.6	------	------	------	------	------	------	------	------	1.6
26. White Side	2.5	------	------	------	------	------	------	------	------	------	------	Tr.
27. Wisconsin No. 1	------	------	------	------	------	------	------	------	------	1.8	------	0.4
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of varieties	8	4	3	4	5	6	10	4	7	8	5	------

While the standardization of oat varieties is fairly good in most Western Oregon counties, many of the varieties reported in Table VIII could well be eliminated. With the exception of Gray Winter, practically all are spring varieties. Most of the spring oats could be replaced by Victory, Three Grain, and Eclipse. Of the leading oat-producing counties in Western Oregon, Clackamas and Marion with four each and Yamhill with five reported the fewest varieties.

BARLEY

Returns from the barley survey are summarized in Table IX. It is of interest to note that approximately the same quantity is reported from Eastern as from Western Oregon. Eastern Oregon reported a total of 18.5 percent of unnamed varieties, while only 6 percent were reported from Western Oregon. Approximately 85,000 bushels were reported from each section.

In Western Oregon, Hannchen with 69.9 percent was the leading variety; 11.8 percent was reported as winter barley and 8.3 percent was reported as O. A. C. No. 7, which is mostly fall planted. In Eastern Oregon Trebi with 51.0 percent was the leading variety. Approximately 26 percent of the barley was reported as beardless. Most of this is probably Meloy or Union Beardless although there may be other hooded varieties grown in this section. Only 7 varieties were reported from Eastern Oregon, and 11 from Western Oregon.

Fewer varieties are reported for barley than for oats or wheat. In both sections of the state barley production is much less than wheat. In Eastern Oregon, Trebi and some of the hooded barleys (Meloy and Union Beardless) can be considered as the leading standardized varieties where moisture conditions are good. Under more arid conditions, Mariout and Hannchen are best adapted. White Club is grown as a winter barley, but should not be grown under severe winter temperatures. Barley production in Western Oregon has been relatively unimportant until recent years. Not many varieties have been grown, but as production increases there is a tendency to try new varieties. Hannchen is the standard spring barley for Western Oregon. The popularity of this variety is evidenced by the survey. On upland soil in the spring it should be sown in preference to any other variety. O. A. C. No. 7 is the recommended fall variety. This variety is also a desirable one for early spring planting, or for spring planting on mellow bottom-lands. These two varieties will usually outyield any of the others reported by growers. Chevalier, Hull-less, and Mariout are much inferior to Hannchen for spring planting. Trebi is a good variety but usually is not equal to O. A. C. No. 7 for early planting or to Hannchen for later planting. O. A. C. No. 7 will normally outyield Tennessee Winter and White Club when fall seeded.

TABLE IX. BARLEY VARIETY SURVEY OF WESTERN OREGON COUNTIES

Expressed in Percentage of Total

Variety	Benton	Clackamas	Douglas	Jackson	Lane	Linn	Marion	Polk	Washington	Yamhill	Total in Western Oregon	Bushels reported
	%	%	%	%	%	%	%	%	%	%	%	*bu.*
Beardless	3.2	-----	-----	79.9	-----	-----	-----	6.4	-----	-----	4.4	3,511
Blue 6 Row	-----	4.9	43.6	13.9	-----	-----	-----	-----	3.4	14.4	3.6	2,872
Chevalier	-----	-----	-----	-----	-----	-----	-----	-----	2.8	-----	0.6	500
Hannchen	76.3	93.5	26.6	-----	91.4	25.9	81.3	81.0	88.1	73.0	69.9	55,600
Hull-less	-----	-----	-----	-----	-----	-----	-----	-----	-----	0.7	Tr.	30
Mariout	-----	-----	29.8	-----	-----	-----	-----	-----	-----	-----	0.9	717
O. A. C. No. 7	20.5	-----	-----	-----	5.9	28.8	-----	12.6	-----	-----	8.3	6,602
Tenn. Winter	-----	-----	-----	-----	2.7	-----	-----	-----	-----	-----	0.3	252
Trebi	-----	1.5	-----	-----	-----	-----	-----	-----	-----	-----	Tr.	48
White Club	-----	-----	-----	6.2	-----	-----	-----	-----	-----	-----	0.2	200
Winter	-----	-----	-----	-----	-----	45.3	18.7	-----	5.7	11.9	11.8	9,168
	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	79,500
*Unnamed	4.6	7.9	-----	25.4	9.7	0.5	10.0	6.7	2.5	-----	6.0	5,319
											Total	84,819

*Percentage of total reported not included in the percentages of named varieties.

BARLEY VARIETY SURVEY OF EASTERN OREGON COUNTIES

Expressed in Percentage of Total

Variety	Baker	Gilliam	Grant	Klamath	Lake	Malheur	Morrow	Sherman	Umatilla	Union	Wallowa	Total	Bushels reported
	%	%	%	%	%	%	%	%	%	%	%	%	*bu.*
Beardless (Meloy)	100.0	100.0	32.4	-----	10.2	-----	100.0	100.0	-----	-----	0.5	26.0	18,576
Canada Club	-----	-----	-----	-----	-----	-----	-----	-----	-----	22.1	-----	3.6	2,585
Hannchen	-----	-----	-----	7.2	65.9	-----	-----	-----	2.7	15.3	-----	4.6	3,324
Mariout	-----	-----	-----	-----	-----	-----	-----	-----	73.2	-----	-----	8.2	5,900
6 Row Mont.	-----	-----	-----	13.0	-----	-----	-----	-----	-----	-----	-----	1.3	960
Trebi	100.0	100.0	67.6	79.8	23.8	100.0	-----	-----	2.5	45.7	99.5	51.0	36,321
White Club	-----	-----	-----	-----	-----	-----	-----	-----	21.6	17.5	-----	5.3	3,793
Total, named varieties	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	71,459
*Unnamed	20.5	27.2	-----	14.1	-----	57.1	25.2	14.6	33.4	3.7	15.5	16.4	17,232
												Total	88,791

*Percentage of total reported; not included in named varieties.

SUMMARY

There have been reported in this survey 43 wheat varieties, 36 oats varieties, and 13 barley varieties. No data are available for oats or barley, but in 1918, 56 wheat varieties were reported for Oregon. Since 1918 the number of wheat varieties has decreased and the percentage of standard varieties has increased materially. There is room for a greatly increased percentage of standardized varieties, particularly in Western Oregon. More emphasis should be placed on varietal names in oats and barley. There is usually but one best variety for a given section or given condition. Oats and barley varieties differ as greatly in yielding ability, quality, and other characters as do wheat varieties. Fewer varieties make for a greater yield, better quality, and a higher price.